ABSTRACT

A method for encoding network data, such as Internet Protocol (IP) data, into a format for transmission over a satellite system is described. The network data is configured in a packet having a data block and header information. The network data packet is encoded into a variable-length multi-packet transport (MPT) frame. The MPT frame comprises a data frame to hold data and header information. The IP packet in inserted its entirety into the data frame of the MPT frame. The variable-length MTP frame is then encoded into one or more fixed-length MTP packets. Each MPT packet has a data fragment block comprising a portion of the MTP frame and associated header information to designate what portion of the MTP frame is contained in the data fragment block. The MPT packets are sized to be embedded as a specific size payload of the satellite packet that is transmitted over a satellite network. Using this method, data received over a data network (i.e., Ethernet or Internet) in large network data packets are broken into smaller packets defined by the mult-packet transport. These smaller packets are then inserted as the data payload within standard fixed-size packets suitable for transmission across a particular distribution medium, such as satellite network. The network data remains independent of the underlying network and can be easily extracted at the receiver for use by computer applications.